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09/961,020	09/21/2001	Hiroaki Kubo	JP920000259US1	5130

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EXAMINER

FLETCHER, JAMES A

ART UNIT	PAPER NUMBER
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2616

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/961,020	Applicant(s) KUBO ET AL.	
	Examiner James A. Fletcher	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-11,13-16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-11,13-16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first compressed data and second compressed data of claims 1, 9 and 16; the additional second compressed data of claims 1, 9, 15; the monitoring means of claims 5, 14, and 18; and the video data decoding section and audio data decoding section of claim 7 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Response to Arguments

2. Applicant's arguments filed 7 June 2005 have been fully considered but they are not persuasive.

In re page 10, Applicant's Representative states: "the Examiner has not presented evidence from the prior art demonstrating that 'is well known to those of ordinary skill in the art at the time of the invention, and is a logical choice for the output of a tuner, particularly on a single digital bit stream. Time-division multiplexing is used in a variety of situations where multiple packetized bit streams must share a common line, such as IP based computer networks and satellite television'..."

In response, the Examiner draws the Applicant's attention to his own admitted prior art in his specification, in the "related art" section, page 1, lines 14-15 "The data 28 is composed of a plurality of programs multiplexed in a time-division manner."

Additionally, as recited in independent claims 1, 9, and 15, the claims recite "compressed audio/video data..." Since the slash character can be interpreted as meaning "or," the disclosure of Yamamoto's data stream as being a multiplexed data stream meets the language of the Applicant's claims 1, 9, and 15.

Further in re page 10, Applicant's Representative states: "The Examiner has not presented an argument based on evidence from the prior art as to why it is allegedly obvious to modify Yamamoto by the preceding feature of claims 1, 9, and 15."

Based on the fact that the original interpretation of Yamamoto's data stream as being a "plurality of programs multiplexed in a time division manner" was not challenged by the Applicant, the Examiner has no reason to present such an argument. However,

in light of the Applicant's admitted prior art, the modification to Yamamoto would certainly be obvious.

In re pages 12 and 13, Applicant's Representative states: "the Examiner has not made any showing of where the prior art suggests 'time division control means for controlling the transmitting and reading of the second compressed data to and from the recording means in a time division manner' for the purpose of 'simultaneous recording and reproduction'."

The Examiner respectfully disagrees. Thomason clearly teaches simultaneous recording and reproduction throughout the reference, particularly in Col 4, lines 37-40, and further clearly teaches the time-division multiplexing of the data being recorded and/or reproduced for that purpose in Col 4, lines 43-67. This is a clarification of the arguments made in the previous Final Rejection Office Action.

In re page 13, Applicant's Representative states: "In 'Response to Arguments' the Examiner alleges that Yamamoto discloses the preceding feature of claims 1, 9, and 15, but is unable to provide a single citation from Yamamoto that supports the Examiner's allegation."

The Examiner, lacking adequate explanation from the Applicant's Representative, believes this statement refers to the statement on Page 3 of the Final Office Action where he stated "Yamamoto discloses his transport stream to be MPEG2, which is defined as a time-multiplexed data stream..." This feature is disclosed in Col 4, lines 28-32, as well as several other places in the reference. Further, Yamamoto also discloses a bit stream with plural multiplexed programs in Col 7, lines 13-15.

Claim Objections

3. Claim 13 is objected to because of the following informalities: in the second limitation, the claim recites "the data reproducing mean..." The Examiner believes the claim should read –the data reproducing means...- The claim will be analyzed and discussed as though it read as the Examiner believes is correct. Appropriate correction is required.
4. Claim 14 is objected to because of the following informalities: The claim is labeled as being original, but it has been amended to change its dependency. Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-3, 5-11, 13-16, and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al (6,628,890), in further view of Thomason et al (6,018,612), and in further view of Burt et al (3,668,308).

Regarding claims 1 and 9, Yamamoto et al disclose an apparatus and method for recording and reproducing digital data, comprising:

- receiving means for receiving first compressed data composed of a plurality of packets, the first compressed data including a plurality of programs multiplexed in a time division manner (Col 4, lines 57-63 "The

demodulation/error correction unit 2 performs demodulation and error correction for the bitstream input from the tuner 1, converts the same into a transport stream [TS] defined by MPEG2 system, and output the TS to the demultiplexer unit 3. The demultiplexer unit 3 demultiplexes an audio or video PES packet of one program from the TS input”);

- data separating means for extracting specific compressed audio/video data corresponding to a desired program from the first compressed data received by the receiving means (Col 4, lines 62-64 “The demultiplexer unit 3 demultiplexes an audio or video PES packet of one program from the TS input”);
- record control means for generating second compressed data including the compressed audio/video data extracted by the data separating means (Col 4, line 67 -Col 5, line 2 “ The PES packet storage block 8 records the audio or video PES packet input from the demultiplexer unit 3, in the A/V-HDD1”);
- recording means for recording the second compressed data generated by the record control means (Col 1, lines 7-8 “digital recording/reproduction apparatus”;
- data reproducing means for decoding the compressed audio/video data included in the second compressed data (Col 5, lines 23-26 “The reproduction device 32 comprises...an A/V decoder 24”);

- reproduction control means for reading the second compressed data from the recording means and transmitting the second compressed data to the data reproducing means (Fig. 1, item 22 “navigation control block”); and
- Yamamoto et al suggest a means for controlling the transmitting and reading of the data to and from the recording means in a time division manner in that he discloses a recording process (Col 4, line 67 – Col 5, line 2) and a reproduction process (Col 5, lines 39-44) that take place at different times, but does not specifically disclose this function as being time-division multiplexing.

Thomason et al disclose an apparatus for recording and reproducing digital data comprising a time division control means for controlling the transmitting and reading of the second compressed data to and from the recording means in a time division manner (Col 4, lines 43-51 “Data arrives at the input terminal 50...but as the disk in the main memory 36 may be temporarily busy for another operation, the data arriving will be buffered in an input buffer 35a... As soon as the disk is capable of receiving the data, the data stored in the input buffer 35a is...applied to the input 54 of the main memory 36, for storage on the disk” and Col 4, lines 53-56 “Data will also be regularly requested from the main memory disk 36 to be displayed on the TV screen. Again the disk may be temporarily busy for another operation. Data is stored in the output buffer 35b is now supplied to the output 51b, and thus applied to the output terminal 53”).

As taught by Thomason et al, time division multiplexing of a read/write head allows for apparent simultaneous recording and reproduction, which improves the performance of the recording and reproducing apparatus and increases its value to the user.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamamoto to provide for time division multiplexing of a single read/write head on the main memory.

Yamamoto and Thomason only discuss the order of recording and reproduction in the "prior art" section, and are silent on the order that data is recorded and reproduced.

The examiner takes official notice that, particularly in the absence of any disclosure to the contrary, the recording and reproduction of data in the order it is received is notoriously well known, widely used, and commercially available in such devices as analog recorders of audio, video signals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify either Yamamoto or Thomason to disclose recording and reproducing data in the order that it is received.

Yamamoto does not explicitly disclose a means to bypass the recording and reproduction steps of his disclosed invention, although Thomason does teach a bypass of data from the main memory 36 through the DMA controller 32.

Further, Burt et al teach a system wherein the signal being recorded is simultaneously provided to a display (Col 4, lines 60-65 "video information is

stored on video tape and simultaneously displayed to the pilot on a TV monitor.

The recording on the tape and play back is designed so as to form a continuously moving map of the area and at any time the pilot can stop the real time display and replay, stop action, or slow motion any portion of the recorded video picture”).

As taught by Burt et al, the simultaneous display of a recorded image signal has advantages in that the user can monitor what is being recorded, and, if necessary, affect that recording, or review what has been recorded when necessary or convenient.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamamoto to permit simultaneous viewing and reproduction of the video signal.

Regarding claim 15, Yamamoto et al disclose an apparatus for recording and reproducing digital data, comprising:

- a receiver for receiving first compressed data composed of MPEG2_TS data, the first compressed data including a plurality of programs multiplexed in a time division manner (Col 4, lines 57-63 “The demodulation/error correction unit 2 performs demodulation and error correction for the bitstream input from the tuner 1, converts the same into a transport stream [TS] defined by MPEG2 system, and output the TS to the demultiplexer unit 3. The demultiplexer unit 3 demultiplexes an audio or video PES packet of one program from the TS input”);

- a filter for extracting specific compressed audio/video data corresponding to a desired program from the first compressed data received by the receiver (The demultiplexer unit 3 demultiplexes an audio or video PES packet of one program from the TS input”);
- a data unloader for generating second compressed data composed of MPEG2-PES data including the compressed audio/video data extracted by the filter (Col 4, line 67 -Col 5, line 2 “ The PES packet storage block 8 records the audio or video PES packet input from the demultiplexer unit 3, in the A/V-HDD1”);
- a recorder for recording the second compressed data generated by the data unloader (Col 1, lines 7-8 “digital recording/reproduction apparatus”);
- reproduction control means for reading the second compressed data from the recorder and transmitting the second compressed data to the decoder (Fig. 1, item 22 “navigation control block”);
- a decoder for decoding the compressed audio/video data included in the second compressed data (Col 5, lines 23-26 “The reproduction device 32 comprises...an A/V decoder 24”).
- Yamamoto et al suggest a means for controlling the transmitting and reading of the data to and from the recording means in a time division manner in that he discloses a recording process (Col 4, line 67 – Col 5, line 2) and a reproduction process (Col 5, lines 39-44) that take place at different times, but does not specifically disclose this function as being time-division multiplexing.

Thomason et al disclose an apparatus for recording and reproducing digital data comprising a time division control means for controlling the transmitting and reading of the second compressed data to and from the recording means in a time division manner (Col 4, lines 43-51 "Data arrives at the input terminal 50...but as the disk in the main memory 36 may be temporarily busy for another operation, the data arriving will be buffered in an input buffer 35a... As soon as the disk is capable of receiving the data, the data stored in the input buffer 35a is...applied to the input 54 of the main memory 36, for storage on the disk" and Col 4, lines 53-56 "Data will also be regularly requested from the main memory disk 36 to be displayed on the TV screen. Again the disk may be temporarily busy for another operation. Data is stored in the output buffer 35b is now supplied to the output 51b, and thus applied to the output terminal 53").

As taught by Thomason et al, time division multiplexing of a read/write head allows for apparent simultaneous recording and reproduction, which improves the performance of the recording and reproducing apparatus and increases its value to the user.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamamoto to provide for time division multiplexing of a single read/write head on the main memory.

Yamamoto and Thomason only discuss the order of recording and reproduction in the "prior art" section, and are silent on the order that data is recorded and reproduced.

The examiner takes official notice that, particularly in the absence of any disclosure to the contrary, the recording and reproduction of data in the order it is received is notoriously well known, widely used, and commercially available in such devices as analog recorders of audio, video signals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify either Yamamoto or Thomason to disclose recording and reproducing data in the order that it is received.

Yamamoto and Thomason only discuss the order of recording and reproduction in the "prior art" section, and are silent on the order that data is recorded and reproduced.

The examiner takes official notice that, particularly in the absence of any disclosure to the contrary, the recording and reproduction of data in the order it is received is notoriously well known, widely used, and commercially available in such devices as analog recorders of audio, video signals.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify either Yamamoto or Thomason to disclose recording and reproducing data in the order that it is received.

Yamamoto does not explicitly disclose a means to bypass the recording and reproduction steps of his disclosed invention, although Thomason does teach a bypass of data from the main memory 36 through the DMA controller 32.

Further, Burt et al teach a system wherein the signal being recorded is simultaneously provided to a display (Col 4, lines 60-65 "video information is stored on video tape and simultaneously displayed to the pilot on a TV monitor. The recording on the tape and play back is designed so as to form a continuously moving map of the area and at any time the pilot can stop the real time display and replay, stop action, or slow motion any portion of the recorded video picture").

As taught by Burt et al, the simultaneous display of a recorded image signal has advantages in that the user can monitor what is being recorded, and, if necessary, affect that recording, or review what has been recorded when necessary or convenient.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamamoto to permit simultaneous viewing and reproduction of the video signal.

Regarding claims 2 and 10, Yamamoto et al disclose an apparatus and method for recording and reproducing digital data wherein the first compressed data is MPEG2-TS data and the second compressed data is MPEG2-PES data (Col 7, lines 22-24 "The demultiplexer unit 3 demultiplexes, from the input TS, an audio or video PES packet...and outputs the PES packet").

Regarding claims 3, 11, and 16, Yamamoto et al disclose an apparatus and method for recording and reproducing digital data wherein a plurality of the MPEG2-PES data is recorded by the recording means as one stream of data (Col 7, lines 27-29 “the PES packet storage block records the audio or video PES packet output by the demultiplexer unit 3, in the AV-HDD”).

Regarding claims 5, 14, and 18, Yamamoto et al disclose an apparatus for recording and reproducing digital data comprising monitoring means for monitoring the amount of data transmitted from the reproduction control means to the data reproducing means (Col 8, line 66 - Col 9, line 1 “the navigation control block 22 instructs the data transfer to the PES packet reading block 21 according to an available space in the PES packet buffer 23”).

Regarding claims 6 and 19, Yamamoto et al disclose an apparatus for recording and reproducing digital data comprising switching means for switching between the compressed audio/video data extracted by the data separating means to the data reproducing means (Col 5, lines 28-31 “The user interface control block 25 receives a playback command for normal play or trick play, entered by a user, and outputs the entered playback command for normal play or trick play to the navigation control block 22”) and transmitting the second compressed data from the reproduction control means to the data reproducing means (Fig. 1, item 22 “navigation control block”).

Regarding claim 7, Yamamoto et al disclose an apparatus for recording and reproducing digital data comprising video data decoding section and audio data

Art Unit: 2616

decoding section for decoding the compressed video data and compressed audio data, respectively, in the data reproducing means (Col 5, lines 53-56 "The A/V decoder 24 decodes the audio or video PES packet data input by the PES packet buffer 23, and outputs the video data to the digital encoder 26 and the audio data to the audio DAC 27, respectively").

Regarding claims 8 and 20, Yamamoto et al disclose an apparatus for recording and reproducing digital data wherein the recording means is a hard disk (Col 1, lines 6-10 "a digital recording/reproduction apparatus for recording/reproducing digital image data which is high-efficiency coded, to/from a random access recording medium such as an A/V-HDD (Audio/Video-Hard Disk Drive)").

Regarding claim 13, Yamamoto et al disclose a method of recording and reproducing digital data comprising the steps of:

- transmitting the compressed audio/video data extracted in the extracting step to the data reproducing means (Col 8, line 66 - Col 9, line 4 "the navigation control block 22 instructs the data transfer to the PES packet reading block 21 according to an available space in the PES packet buffer 23. The PES packet reading block 21 extracts an audio or video PES packet from the A/V-HDD 1 [10], and output the PES packet data to the PES packet buffer 23").
- while simultaneously blocking transmission of the second compressed data from the reproduction control means to the data reproduction means (Col. 5, lines 56-59 "The digital encoder 26 converts the video data received from the A.V decoder 24 into a television output signal, and outputs the signal to the

outside.” There is no indication that any other signal, including any signal that might be made available to be recorded by AV-HDD 1 [10] being available for reproduction. The use of the word “or” means only one limitation need be discussed);

Yamamoto et al do not disclose a switch for selecting either the data to be recorded or the data being reproduced.

Burt et al teach a system where either the signal being input to the system for recording, or a signal that has already been recorded, can be selected for display to the user (Col 4, lines 60-65 “video information is stored on video tape and simultaneously displayed to the pilot on a TV monitor. The recording on the tape and play back is designed so as to form a continuously moving map of the area and at any time the pilot can stop the real time display and replay, stop action, or slow motion any portion of the recorded video picture”).

As taught by Burt et al, the simultaneous display of a recorded image signal has advantages in that the user can monitor what is being recorded, and, if necessary, affect that recording, or review what has been recorded when necessary or convenient.

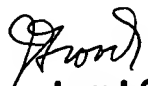
Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Yamamoto to permit simultaneous viewing and reproduction of the video signal.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Fletcher whose telephone number is (571) 272-7377. The examiner can normally be reached on 7:45-5:45 M-Th, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Groody can be reached on (571) 272-7950. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JAF
14 September 2005


James J. Groody
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Art Unit-262 2616